ABSTRACT OF THE DISCLOSURE

A method for distinguishing between sources of process variation includes processing a plurality of manufactured items in a process flow; storing a set of production environment data associated with each of the manufactured items; identifying manufactured items

5   associated with a process drift; generating a plurality of characteristic threads based on the production environment data; comparing the characteristic threads for at least those manufactured items associated with the process drift; and determining at least one potential cause for the process drift based on the comparison of the characteristic threads. A manufacturing system includes a plurality of tools for processing manufactured items in a

10 process flow, a database server, and a drift monitor. The database server is adapted to store a set of production environment data associated with each of the manufactured items. The drift monitor is adapted to identify manufactured items associated with a process drift, generate a plurality of characteristic threads based on the production environment data, compare the characteristic threads for at least those manufactured items associated with the process drift,

15 and determine at least one potential cause for the process drift based on the comparison of the characteristic threads.